What is claimed is:

1. An illumination unit for a projection image display, the illumination unit comprising:

a light source;

an integrator, which converts light emitted from the light source to have uniform optical intensity; and

an aspect ratio conversion unit, which transmits light emitted from the integrator that does not correspond to an aspect ratio of image information back to the integrator, and converts and emits incident light to correspond to the aspect ratio of the image information.

2. The illumination unit of claim 1, wherein the aspect ratio conversion unit comprises:

a slit member, which is installed on a side of the integrator on which light is emitted, adjusts an aspect ratio of a cross-section of the integrator on which light is emitted according to the aspect ratio of the image information and reflects light, which does not correspond to the aspect ratio of the image information, back to the integrator;

a recycling member, which is provided on a side of the integrator on which light is incident and is a reflective body which reflects light that has been reflected back to the integrator from the slit member, and in which a light window is formed so that light emitted from the light source is incident on the integrator; and

a driving unit, which drives the slit member.

3. The illumination unit of claim 2, wherein the slit member includes a reflective mirror installed to be movable in at least one direction of a widthwise direction and a lengthwise direction of the cross-section.

4. The illumination unit of claim 2, wherein the slit member includes a pair of reflective mirrors installed to be adjacent or spaced apart from each other in at least one direction of a widthwise direction and a lengthwise direction of the cross-section.

5. The illumination unit of claim 1, wherein the integrator is a transparent rod formed of a transparent material.

6. The illumination unit of claim 1, wherein the integrator is a hollow-shaped light tunnel having internal reflective surfaces.

7. A projection image display comprising an illumination unit, an optical modulator which modulates light emitted from the illumination unit according to image data, and a projection optical system which enlarges and projects light emitted from the optical modulator, wherein the illumination unit comprises:

a light source;

an integrator, which converts light emitted from the light source to have uniform optical intensity; and

an aspect ratio conversion unit, which transmits light emitted from the integrator that does not correspond to an aspect ratio of image information back to the integrator, and converts and emits incident light to correspond to the aspect ratio of the image information.

8. The projection image display of claim 7, wherein the aspect ratio conversion unit comprises:

a slit member, which is installed on a side of the integrator on which light is emitted, adjusts an aspect ratio of a cross-section of the integrator on which light is emitted according to the aspect ratio of the image information and reflects light, which does not correspond to the aspect ratio of the image information, back to the integrator;

a recycling member, which is provided on a side of the integrator on which light is incident, is a reflective body which reflects light that has been incident back on the integrator using the slit member, and in which a light window is formed so that light emitted from the light source is incident on the integrator; and

a driving unit, which drives the slit member.

9. The projection image display of claim 8, wherein the slit member includes a reflective mirror installed to be movable in at least one direction of a widthwise direction and a lengthwise direction of the cross-section.

10. The projection image display of claim 8, wherein the slit member includes a pair of reflective mirrors installed to be adjacent or spaced apart from each other in at least one direction of a widthwise direction and a lengthwise direction of the cross-section.

11. The projection image display of claim 7, wherein the integrator is a transparent rod formed of a transparent material.

12. The projection image display of claim 7, wherein the integrator is a hollow-shaped light tunnel having internal reflective surfaces.

13. The projection image display of claim 7, wherein the optical modulator comprises at least one of a reflection type optical modulator.

14. The projection image display of claim 7, wherein the optical modulator comprises at least one of a transmission type optical modulator.